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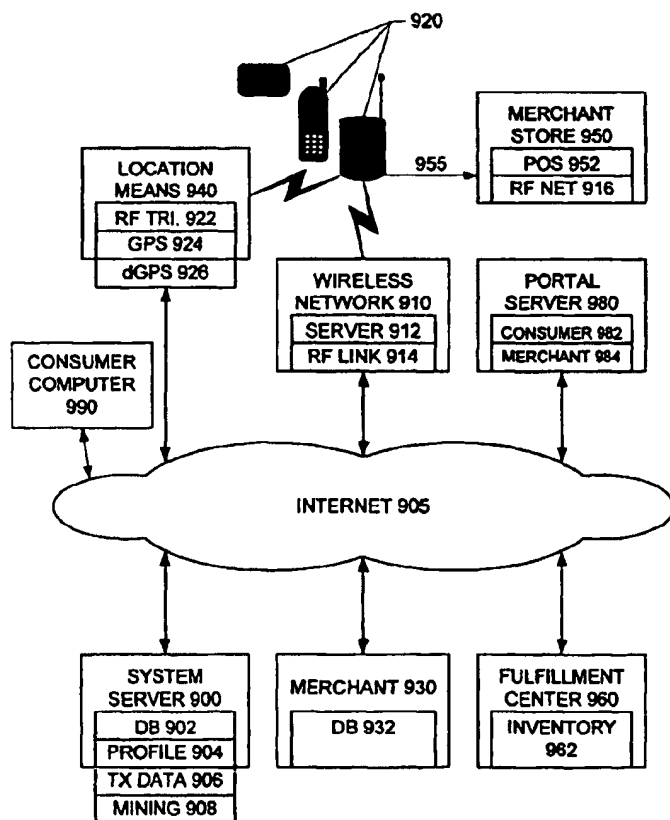
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(54) Title: SYSTEM AND METHOD FOR WIRELESS PURCHASES OF GOODS AND SERVICES



(57) Abstract: A consumer wireless shopping device (920), such as a phone or PDA, communicates with a server (900) for completing purchase transactions. Consumers can store preferences, shopping lists, payment methods and shipping addresses on the server (900) to aid with shopping. The location of the device is determined, such as by GPS (924) or RF triangulation (922), and used by the server (900) to help direct consumers to merchant locations (950) for viewing items to be purchased as well as to inform consumers of special sales or desired items within a specified geographic distance. The system allows for use of various delivery options, including in-store pick-up and Internet fulfillment (960). The system also allows for use of various price-negotiation methods, including use of auction-bidding, competitor price-matching, and buying clubs, and volume discounting.

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System and Method for Wireless Purchases of Goods and Services

FIELD OF THE INVENTION

This invention relates generally to purchasing of goods and services via a wireless shopping device. More particularly, the present invention is a system and method for using wireless shopping devices to attract a consumer to a store, to purchase goods and services via wireless interaction with the Retailer, without requiring the retail establishment to stock a complete line of inventory for customers.

BACKGROUND OF THE INVENTION

Purchasing of goods and services in retail establishments or "stores" formerly was a way of life. A customer would go to a store, be able to see the merchandise of interest, select a size and color of the merchandise desired, stand in a line to pay for the goods and services, pay for the goods, and take the goods home.

However, in order for a retail establishment to be successful, it had to store a substantial inventory in order to meet the customer's demands for size, color, and other characteristics. The problem of inventory stocking and management is expanded with every product line carried by a store. In addition, inventory might be present in one store and not be present in another, leading consumers to be discouraged in their shopping experience and/or having to travel to yet another store in order to obtain the goods desired.

With the advent of the Internet, a number of these problems have been made much simpler. Consumers purchasing goods and services on the Internet now view a picture of the goods desired, and purchase the goods. The goods are subsequently delivered by any number of different means to the customer at a subsequent time.

This invention now opens the way for a new group of Internet Retailers (e-tailers) to exist and compete heavily with traditional "Brick and Mortar" Retailers. E-tailers might have only one warehouse filled with merchandise making inventory control simpler by the fact that only one location has all of the goods to be shipped. There is not the problem of, for example, a shirt in one color but the wrong size present at one store and a shirt that is the correct size being available at another store. All goods are located in one place. Therefore fulfillment of a customer's order is greatly simplified.

However, Internet shopping, as large an enterprise as it is, is not accepted by a very large number of the consuming population that desires to see and touch the merchandise that they wish to purchase. For this to take place, the consumer must proceed to a retail

1 establishment and use the old paradigm of finding the desired goods, hoping they are in the
2 correct size and color, and purchasing the goods in a conventional fashion. Even with that,
3 new companies are planning to offer services where a consumer will go into the store, see,
4 touch and try on the merchandise, use a wireless device to connect and compare-shop the
5 same merchandise at various e-tailors and order from the most convenient for later delivery.
6 This will further hurt the traditional Brick and Mortar Retailers by becoming mostly a
7 showcase for merchandise that gets purchased over the Internet from other suppliers.

8 For large and small retailers alike, this might drive these companies out of business.
9 What would therefore be desirable is a system which allows a consumer to proceed to a retail
10 establishment, see the actual goods to be purchased, give the Retailer the opportunity to work
11 out a deal with the consumer to purchase the goods in a more convenient fashion and at a
12 competitive price and have those goods sent to the consumer's home. Such a system would
13 also be used by retailers of any size.
14

15 **SUMMARY OF THE INVENTION**

16 It is therefore an objective of the present invention to allow consumers to see and
17 touch the merchandise that consumers wish to purchase, while offering the consumer the
18 convenience of wireless interaction with the merchant in whose store the consumer is located.

19 It is yet another objective of the present invention to allow consumers to purchase the
20 merchandise with the convenience of wireless interaction with the merchant while the
21 consumer is not actually at the store.

22 It is a further objective of the present invention to minimize inventory-stocking issues
23 for retailers of all sizes.

24 It is yet another objective of the present invention to allow wireless purchasing of
25 goods at a retailer with subsequent delivery as desired by a consumer.

26 It is yet another objective of the present invention to allow consumers to use a
27 wireless shopping device to determine the physical location of the goods desired.

28 It is yet another objective of the present invention to allow consumers to determine
29 the location where the desired goods are sold and which location is close to the physical
30 location of the consumer.

31 It is yet another objective of the present invention to allow consumers to purchase a
32 product "on the spot" in the retail establishment via a wireless shopping device.

33 It is a further objective of the present invention to permit consumers to establish a list of
34 products and services that are desired by the consumer (a private or public wish list) and

1 which may be purchased by others for the consumer as in a gift registry.

2 It is still another objective of the present invention to permit consumers to send gifts
3 to others via wireless interaction with the retailer while in the store or remote from the store.
4 It is yet another objective of the present invention to permit consumers to select, gift wrap,
5 and send personalized cards along with selected gifts.

6 It is yet another objective of the present invention to allow consumers to pre-register
7 their desires for goods and services and have a server transmit information on the desired
8 goods and services, and where the goods and services can be obtained, to the consumer when
9 the desired goods and services are on sale.

10 It is a further objective of the present invention to permit in-store bidding using a
11 wireless shopping device for goods and services by consumers.

12 It is still another objective of the present invention to permit consumers to start and/or
13 to join in-store buyer's groups in order to obtain the best prices for the desired goods and
14 services.

15 It is yet another objective of the present invention to offer consumers a 1-click
16 shopping service during wireless interaction with the merchant while in-store or remotely.
17 The service allows consumers to pre-define all required data including but not limited to
18 billing information and delivery address for faster processing of the purchase order.

19 It is yet another objective of the present invention to allow consumers to re-order
20 previously purchased goods either by scanning the already purchased product or looking it up
21 through the service databases.

22 It is yet another objective of the present invention to allow consumers to inquire about
23 out-of-stock merchandise.

24 It is yet another objective of the present invention to permit consumers to order goods
25 not present at a store where they are shopping and present in another.

26 It is yet another objective of the present invention to provides consumer reviews of
27 goods and services, in-store, that a consumer desires to purchase, via a wireless connection to
28 the consumer to assist in the buying decision.

29 It is a further objective of the present invention to "push" information on sales of
30 goods and services that are desired by a consumer to the consumer while the consumer is in-
31 store at a retail establishment or when the consumer is within a pre-defined distance of the
32 store.

33 It is still another objective of the present invention to provide consumers with a
34 wireless method for specifying delivery options for goods that are purchased.

1 It is yet another objective of the present invention to provide a unique purchase code
2 that can be used by the consumer during checkout when the consumer wishes to physically
3 purchase the desired goods and leave the store with those goods.

4 It is yet another objective of the present invention to tie stores together in a single
5 retailing unit that will honor sales and deals made with a consumer for the purchase of goods.

6 It is a further objective of the present invention to tie any transaction code into an
7 inventory management system that provides the retailer with inventory management and
8 automated ordering of merchandise.

9 It is a further objective of the present invention to create a system to measure
10 consumers shopping behavior across many retailers for strategic mining and analysis of
11 shopping patterns.

12 It is still another objective of the present invention to allow consumers to request
13 matching prices from a retailer while in-store based upon other sale prices that are broadcast
14 to the consumer's wireless shopping device.

15 It is yet another objective of the present invention to allow consumers who are in-
16 store to request an "on the spot" discount based upon volume of merchandise being
17 purchased while in-store.

18 It is a further objective of the present invention to create a wireless in-store "shopping
19 cart" noting for the consumer all of the goods about to be purchased while in store.

20 It is still another objective of the present invention to allow a server to suggest a gift
21 to be purchased based upon demographic information input by the consumer into a wireless
22 shopping device.

23 It is yet another objective of the present invention to allow a consumer to create a
24 personal/recipient profile while in-store or remote from the store, thereby allowing gift
25 suggestions to be made over a wireless network.

26 It is still another objective of the present invention to allow a server to suggest
27 matching products to go with product of interest based on purchase behavior of other
28 shoppers or store recommendations.

29 It is yet another objective of the present invention to permit consumers to request that
30 the retailer make an offer on goods to be purchased.

31 It is still another objective of the present invention to allow consumers the ability to
32 check the status of a previously placed purchase order.

33 These and other objectives of the present invention will become apparent from a
34 review of the specification that follows.

1 The present invention is a system and method for shopping wherein a consumer uses a
2 wireless shopping device to identify and order goods from a merchant. The wireless
3 shopping device comprises an ability to identify the goods to be ordered, transmit the order to
4 a fulfillment center affiliated with or run by the merchant, and subsequently have the desired
5 goods shipped to the consumer's residence or another location as desired.

6 A significant aspect of the present invention is the fact that the wireless shopping
7 device of the present invention has a product identification means which, for example, could
8 be a scanner for scanning UPC codes as well as communication means to allow the wireless
9 shopping device to contact the fulfillment house to determine which of the desired goods are
10 available. Once it is determined that the desired goods are in fact available, the consumer can
11 purchase the goods using the wireless shopping device and by designating a payment
12 methodology whether it be by prearranged credit or through a credit card.

13 In practice, the consumer would proceed to the retailer, see the particular merchandise
14 desired to be purchased, use the wireless shopping device to scan an identification code
15 associated with the goods to be purchased, connect to the fulfillment house to determine the
16 availability and to purchase the goods, and receive an electronic confirmation of the
17 purchase.

18 The advantage of the present invention is that consumers will be able to proceed to a
19 particular retail establishment, see the goods to be purchased, purchase the goods, and leave
20 the store without having to carry parcels that have been purchased.

21 The present invention also comprises a position locator, such as a global positioning
22 system (GPS) device, so that, at any time, the user's location can be made known to a server
23 having an electronic "yellow pages." The consumer uses the wireless shopping device to
24 designate the type of goods desired to be purchased. Thereafter, the server of the present
25 invention identifies for the consumer, based upon the geographic location of the consumer,
26 the nearest location of the desired goods. The consumer can designate an acceptable range,
27 for example, a half-mile, or a mile from their given location. The server of the present
28 invention then sends to the consumer's wireless shopping device, the location of stores that
29 carry the desired goods, and any sales or discounts being offered on the goods desired.

30 Thus, using the present invention, a consumer can purchase desired goods without
31 having to carry the goods home, and determine where the desired goods are actually located
32 within a reasonable radius of the physical location of the consumer. In an additional
33 embodiment, the consumer can purchase the desired goods with the wireless shopping device

1 and receive a purchase code to present at checkout in order to take the goods from the store in
2 an expedited fashion.

4 **BRIEF DESCRIPTION OF THE FIGURES**

5 Figure 1 illustrates the overall architecture of the present invention.

6 Figure 2 illustrates the data flow processes of the proposed shopping services.

7 Figure 3 illustrates the process of providing the consumer the unique purchase code to
8 be used during checkout.

9 Figure 4 illustrates the process of requesting and purchasing gift ideas.

10 Figure 5A illustrates the process of creating wish lists and gift registries.

11 Figure 5B illustrates the process of having a designated shopper.

12 Figure 5C illustrates the process of creating and using private gift lists.

13 Figure 6 illustrates the use of yellow pages to search for specific goods and the use of
14 yellow pages services to locate stores identities and locations.

15 Figures 7A-D and 8A-D illustrate a preferred graphic interface of the present
16 invention.

17 Figure 9 illustrates another embodiment of the present invention.

19 **DETAILED DESCRIPTION OF THE INVENTION**

20 As noted above, the present invention is a system and method for purchasing of goods
21 and services in a wireless fashion while the consumer is in-store at a retailer's establishment
22 or remotely through wireless interaction with the retailer.

23 Referring first to **Figure 1**, the overall architecture of the present invention is
24 illustrated. The server 22 of the present invention system comprises a processor having
25 memory, storage, communications capability and an array of programs and databases to
26 support the objective of the present invention. For example, consumer files are maintained in
27 the server storage 24 that relate to the identity of the consumer, contact information such as
28 telephone numbers and internet addresses as well as contact information relating to the
29 wireless shopping device(s) owned by the consumer and over which communications are to
30 be sent. Further, the demographic information of the consumer along with preference for
31 certain products or services are also maintained. In this way a consumer can be alerted to
32 sales that a manufacturer is offering, and, as will be explained below, so that others with
33 appropriate permission can access a list of items desired by the consumer. It should be noted
34 that while a single server is illustrated, this is not meant as a limitation since multiple servers

1 in communication with one another are also contemplated and are within the scope of the
2 present invention. Additionally, where multiple servers are illustrated, this also is not meant
3 as a limitation since it is also contemplated that a single server could provide multiple
4 functions.

5 The server also allows files of "wish lists" and the associated stores at which the items
6 on the list can be found. This list is stored in the server storage 28 and associated with the
7 specific consumer. This capability allows consumers to see items in a store and designate
8 those items as the type that the consumer desires. Thereafter, third parties can find out what
9 the consumer needs as in, for example, a wedding present, Christmas present or for any other
10 occasion.

11 The server 22 also maintains a database of those merchants that are subscribers to the
12 system. Again contact information relating to the merchant is stored so that access can be
13 accomplished over any appropriate network be it the Internet, a dial up network, a wireless
14 network or over a PSTN. Further, a database of current sales, the geographic location of the
15 stores of the merchant, and specific products offered by the merchant are also maintained.

16 The server also has a number of programs to support the consumer's shopping. A
17 location analysis program receives information from a position determination means 16 and
18 is processed by the server to allow the server to know where the consumer is physically
19 located and how that location relates to the merchants that are subscribers to the system. This
20 location program receives information for the position determination means 16 which may be
21 the Global Positioning System (GPS), an RF triangulation program or other geographic
22 location programs known in the art, via the wireless consumer device.

23 The location program compares that information regarding the location of the
24 consumer and the location of subscriber stores, as well as the shopping needs and desires of
25 the consumer, and notifies the consumer of the location of the nearest stores that sell the
26 desired products. The location program in the server also receives the consumer's
27 preferences for store locations (i.e. no more that one mile from the consumer location at any
28 point in time) and factors those preferences into the location program.

29 The server further possesses notification programs that provide the consumer with a
30 notification of sales of desired products. The server receives information on sales that are
31 established by the merchant subscribers to the system. These sales events are stored, along
32 with any limitations, and are compared to the consumer database. If the server determines
33 that the consumer desires the goods that are on sale and that the particular consumer is on
34 line, a notification is sent directly to the wireless shopping device of the consumer. If the

1 consumer is not on line, the server stores the message as a shopping email to be retrieved by
2 the consumer at a later time.

3 The database 24 is connected to the server 22. Server 22 is in turn connected to,
4 preferably, the Internet 20 although this is not meant as a limitation. Other wired and
5 wireless networks as noted above will also serve as well.

6 Subscriber merchants 26 and 28 are also connected to the network to which the server
7 of the present invention is connected. These merchants register with the server of the present
8 invention and provide store location, product and sale information to the server for
9 dissemination to consumers.

10 The server 22 of the present invention can determine the location of the consumer by
11 virtue of signals received from a position determination means 16 via the consumer's
12 wireless shopping device. This position determination means is, as noted above, preferably
13 the global positioning system (GPS) although this is not meant as a limitation. Any position
14 determination means that allows the location of the consumer possessing the wireless
15 shopping device for shopping is suitable for the present invention. Each consumer possesses a
16 wireless shopping device 12,14. These wireless shopping devices have memory for storing
17 programs relating to the sale and purchasing functionality noted herein and provide two-way
18 data and voice communication with the server 22 of the present invention. Each wireless
19 shopping device 12,14 has the capability of determining an identification code for the product
20 to be purchased. The user of wireless shopping device 12, for example, proceeds to a
21 particular retail establishment that is a subscriber merchant of the present invention. Once at
22 the retail establishment, the consumer having wireless shopping device 12 can use the device
23 to determine the price and availability of goods that are desired to be purchased.

24 The consumer uses the wireless shopping device 12 to scan a code or otherwise
25 identify a particular product to be purchased. Once the user identifies the product, the user
26 can cause the wireless shopping device 12 to send a signal over wireless network 18 over the
27 Internet 20 to the server 22 of the present invention requesting a price for the item and
28 availability of the item. The customer is also provided with reviews of the product by the
29 server 22 so that the customer can make an informed buying decision.

30 The server 22 of the present invention reviews the information in its database 24 and,
31 if price and availability information is available from the local database, conveys that
32 information back over the Internet over 20, over the wireless network 18 to the wireless
33 shopping device 12. If the server 22 of the present invention does not have appropriate price
34 information in its own database, the server 22 sends a request for pricing and availability to

1 merchants 26 and 28 as appropriate. If the product desired is at, for example, merchant 26,
2 the server 22 will send an appropriate request for information to merchant 26. Thereafter,
3 merchant 26 will provide the appropriate price information to the server 22 which conveys
4 that information to wireless shopping device 12.

5 The merchant 26 also provides any sale information to the server 22 when such
6 information becomes available and without the need for a specific request for such
7 information. In this manner, a consumer using the wireless shopping device 12 can be
8 notified of the latest sale information when the consumer is in the merchant's store. This
9 notification is made in near real-time once the server 22 determines that a sale relating to
10 merchant 26 is in progress, that the wireless shopping device 12 is on the air, that the wireless
11 shopping device is at or near the store at which the sale is occurring, and if appropriate, the
12 item is one that is desired by the consumer.

13 Consumers using the present invention can register with the server 22 through their
14 individual wireless shopping devices 12,14 or through workstations or personal computers
15 10, 30 that are connected to the Internet. In this latter registration process, user/ consumer
16 workstations 10, 30 connect to Internet 20 and thereby access server 22. Individual profiles
17 for the individual consumers can then be established along with the identity of the wireless
18 shopping devices 12,14 (respectively) that are associated with the users who are using
19 workstations 10 and 30.

20 The server of the present invention can also receive communication from wireless
21 shopping devices 12,14 to help the consumer locate desired goods. In this instance, for
22 example, a consumer having wireless shopping device 14 and, being in a particular location,
23 inquires of server 22 the identity of the store that is geographically closest to the consumer
24 and which carries the desired products to be purchased. The server 22 receives the location
25 signal from wireless shopping device 14 over wireless network 18, over Internet 20 and then
26 to the server 22. The server notes the location of the wireless shopping device 14, and also
27 notes the product that is desired by the consumer having wireless shopping device 14. Armed
28 with the location of the consumer, and information concerning the consumer's desire for new
29 product, the server of the present invention 22 searches its own database 24 for the location
30 of the merchant carrying a particular product who is within the pre-specified radius distance
31 over which a consumer would be willing to travel to obtain the desired product. Once this is
32 determined, a signal is sent back to the consumer over the Internet 20 and the wireless
33 network 18 notifying the consumer of where the desired products may exist.

34 On line "Yellow Pages"

1 Another function of the present invention is to allow consumers who are in a
2 particular geographic location to request of the server 22, the location of stores that have
3 particular products that are desired by the consumer. Thus the consumer simply keys in or
4 otherwise designates the products desired. By virtue of the server's location program, the
5 server can inform the consumer of the store identity and location so that the consumer can
6 proceed to the store with the desired merchandise.

7 The server will also have a record of any sales incentives at the stores near to where
8 the consumer is located. Thus in addition to informing the consumer of store location, the
9 server 22 can inform the consumer of where the best deals are for the products desired.

10 In-Store Purchasing

11 Using the present invention the consumer is also able to have a wide variety of in-
12 store interactions with the merchant. For example, when a consumer is in the store, the
13 consumer uses the wireless shopping device 12, 14 to identify and determine the price for
14 goods desired. The consumer can then purchase the goods if they are in the store in a
15 wireless mode without having to go through the conventional checkout process. The
16 consumer simply identifies the goods desired, provides credit/debit card information (or any
17 other form of electronic payment) over the wireless shopping device and receives an
18 authorization code that denotes that the item to be purchased has been paid for.

19 The consumer then proceeds through a modified checkout procedure wherein the
20 authorization code is made known to a checkout device. The code is verified and the
21 consumer leaves with the desired goods.

22 In-Store Price Negotiation

23 Using the present invention, the consumer can perform in store negotiation and price
24 comparison. Once the consumer locates the goods desired, price information concerning the
25 goods is determined. The consumer may then inquire of the server 22 of the present
26 invention if another merchant is offering the same goods on more favorable terms. If this is
27 the case, the consumer can make those more favorable terms known to the merchant where
28 the consumer is located via the wireless device.

29 All communication of the type noted above flow through the server 22, which
30 facilitates contact with the subscribing merchants 26, 28. If the merchants agree to the price
31 change, the consumer proceeds with the purchase procedure and an authorization code is
32 issued. The consumer then checks out as noted above with the goods at a more favorable
33 price.

1 Another form of in-store negotiation that takes place using the wireless shopping
2 device 12, 14 is a bidding process. There may be many reasons why a merchant might be
3 willing to accept lower prices than those marked for goods. The consumer using the wireless
4 shopping device of the present invention again determines the price of the goods. The
5 consumer can then notify the merchant via the wireless shopping device and the server 22
6 that the consumer desires to pay only a certain price for the goods desired. The merchant can
7 then either accept the bid, reject the bid, or make a counteroffer for consideration. If an
8 agreement is reached, the consumer purchases the desired goods in a wireless fashion as
9 noted above, receiving an authorization code for checkout purposes.

10 Delivery Option Processing

11 It frequently may be the case that a consumer desires to purchase goods but does not
12 desire to carry those goods from the store. This is the case where a consumer simply prefers
13 goods to be delivered to his home or where the goods are to be delivered elsewhere. In either
14 case, as part of the in-store purchasing of goods, the consumer is given the option of
15 specifying where the goods are to be delivered. Using the wireless shopping device, the
16 consumer can specify the consumer's own address or the address of another. The goods will
17 then be delivered as desired.

18 Other Shopping Options

19 If the consumer so desires, other options for handling of goods can be designated
20 using the wireless shopping device. For example, the consumer may want the goods to be
21 held to later in the day when all shopping is completed or until a later date for pick up.
22 Alternatively, the consumer can designate that the goods are to be gift wrapped for later pick
23 up. These options are all performed via wireless transaction to the server 22, which in turn
24 notifies the merchant of the consumer's choice.

25 Product Advice

26 As noted above the present invention allows a variety of product advice to be given to
27 the consumer. Since the consumer will complete a consumer profile as part of the
28 registration process, the server of the present invention can suggest items to be purchased by
29 the consumer when the consumer is in the particular merchant's store. This suggestion is
30 based on the user's demographic profile and stated desire for certain goods.

31 If a "wish list" or shopping list is generated by the customer, the server 22 of the
32 present invention can remind the consumer of the items that are to be purchased. Further, the
33 server can notify the consumer of any sales on desired items.

1 If the consumer is shopping for another person, the consumer can also signal to the
2 server the demographic information on the person for whom a gift is to be purchased. The
3 server can then suggest items based upon the demographics of the gift recipient and the items
4 that are available in the store in which the consumer is located. The suggested gift can then
5 be purchased in the wireless fashion noted above and shipping instructions can also be
6 designated.

7 Buying Groups

8 A modern phenomenon in purchasing is the notion of buyers groups whereby many
9 individuals band together to purchase a larger quantity of goods and thereby receive a greater
10 discount on those goods. Using the wireless shopping device 12, 14 consumers can inquire
11 of the server 22 while they are in-store if there are any buyers groups that are particularly
12 useful in purchasing goods from the store in which the consumer is located. Any such groups
13 are researched in the database 26, and the consumer is notified of their existence. The
14 consumer can then join any such group on the spot, receive the appropriate codes or
15 authorizations, and proceed with purchases in the store as a member of the buyers group in
16 question. As noted earlier, the customer can also start a buying group and invite others to
17 participate thereby also obtaining discounts on products.

18 Inventory Control

19 While there are significant advantages to the consumer in using the wireless shopping
20 device of the present invention, there are significant advantages to retailers as well. By
21 encouraging a "showroom" model for the purchase of goods and services retailers reap
22 several benefits. Chief among them are inventory control. For large and small retailer alike
23 the storage of inventory represents significant costs. Space must be allocated to inventory to
24 meet consumer demands. Some guesswork is required in order to anticipate user purchase
25 habits which can differ from region to region. Fulfillment of orders requires a staff of
26 personnel at each location where inventory is located. Moving inventory from one location
27 to another also requires efforts, expense and knowledge of where the inventory is actually
28 located.

29 By having the showroom model, with inventory fulfilled from a central location,
30 significant cost savings are reaped by the retailer. Inventory is stored mainly in one location
31 leaving more room for a greater variety of goods to be displayed at the retail locations.
32 Further, fulfillment from a central location means that fewer personnel are required across
33 many retailers. Smaller retailers who might not ordinarily be able to have a separate

1 fulfillment center can band together to have a central center that fills the needs of a number of
2 retail establishments.

3 Inventory accounting and tracking also improves under the present invention. Since
4 the inventory is all in one place, it is easier to track and account for. This in turn makes the
5 spotting of buying trends easier with an accompanying accuracy in the ordering of further
6 merchandise. Knowledge of the amount of merchandise on hand also makes the offering of
7 incentives and sales easier since any given merchant can better understand the stock on hand.
8 Decisions on how to move that stock can then be made in a more timely manner.

9 Referring to **Figure 2**, an overview illustration of the shopping services of the present
10 invention is illustrated. A consumer enters a specific store **50** and, using a wireless device
11 that is either brought with a consumer or provided by the store, logs into the system of the
12 present invention **52**. Using, for example, a scanning capability on the wireless device, the
13 consumer enters the UPC code of the desired goods **54**. This UPC information is transmitted
14 in a wireless fashion to the server of the present invention. In response to this UPC code and
15 the implied desire to obtain information about the desired product, the server of the present
16 invention downloads product reviews to the consumer's wireless device **56**.

17 If after a review of the product reviews, the consumer desires to purchase the goods in
18 question, the consumer so indicates and the goods are added to the electronic shopping cart
19 **58** of the consumer.

20 The consumer then has a number of options available once the goods are added to the
21 shopping cart. The consumer can purchase the goods immediately, bid on the goods at a
22 price desired by the consumer, request that the store match the price of the goods offered in
23 another location, and/or request that the store accept a specific offer other than the stated
24 price from the consumer.

25 These various options allow the consumer to obtain the goods at a favorable price.

26 Additional functions also allow the consumer to have some flexibility in pricing. For
27 example, the consumer can also request a volume discount when the number of shopping
28 items in the shopping cart will exceed a certain dollar volume. The consumer can also
29 register for any sale that is taking place, of which the consumer may not be aware.

30 Buying clubs are also a way of obtaining goods at a favorable price. The consumer
31 can inquire and will receive information from the server relating to any existing buying group
32 which the consumer may be eligible to join and which will result in the consumer obtaining
33 goods at a more favorable price. Further, the consumer may form a buying group and invite
34 others to join the buying group in order to obtain favorable pricing.

1 If an item is out of stock, the consumer can request of the server where the same
2 goods may be obtained. If the goods can be obtained from a warehouse operation for the
3 specific store in question, the server will so advise the consumer and an order may be placed.
4 If a particular size, color or design is unavailable at the store in which the consumer is
5 located, the consumer can place an inquiry to the server of the present invention to determine
6 where the appropriate goods and services may be ordered. Additionally, and without
7 limitation, the consumer may also inquire about other products which match the requirements
8 for the desired product that the consumer would like to order. In this case, the server of the
9 present invention will offer suggestions to the consumer for alternative goods that would be
10 similar to those which the consumer desires to purchase, and which would be available on the
11 specific store in which the consumer is located.

12 In response to all of these various shopping services, the consumer enters the desired
13 response and completes an appropriate shopping request to order the desired goods 62.
14 Thereafter, the server connects to the merchant's server 64 to place the order for the goods
15 desired.

16 After the order is placed with the merchant's server, the consumer's request is
17 processed 66, and the consumer is notified of the result 68. Such a result could be that the
18 goods are available and can be shipped as desired by the consumer. The consumer then acts
19 on the result by purchasing the goods and services electronically using credit instruments
20 known in the art 70.

21 Referring to Figure 3, the process flow whereby a store clerk is notified of the
22 consumer's specific arrangement for the purchase of goods is illustrated. Again, the
23 consumer enters a specific store 50 and logs onto the system of the present invention using
24 the wireless device 52. The consumer finds and enters a UPC code or other graphical code or
25 identifier associated with desired goods 54. The consumer then selects the shopping service
26 desired which involves negotiating with the merchant 60. As noted above, such negotiations
27 include bidding for the particular product, requesting a matching price, making an offer to the
28 merchant, and/or obtaining a volume discount based upon total purchases.

29 The server receives the consumer's desired choice and connects to the merchant's
30 server 64. The merchant server processes the consumer's request 66 and the consumer is
31 notified of the results 68. Assuming that the merchant and the consumer have reached
32 agreement on the specific method of purchase as noted above, a unique encrypted code
33 relating to the consumer's specific deal for the goods being purchased is sent to the
34 consumer's wireless device 72. In a specific checkout line for users of the present invention,

1 the consumer passes the encrypted code to the store clerk who, using specific checkout
2 equipment, decrypts and registers the specifics of the purchase for the goods by the consumer
3 74. The transaction is then completed with the consumer being charged in methods known in
4 the art based upon the specific deal worked out between the consumer and the merchant at the
5 time of purchase 76.

6 Referring to Figure 4, the general flow for gift search services of the present
7 invention is illustrated. The consumer enters a specific store 50 and logs onto the system of
8 the present invention 52 using the wireless device of the consumer. Using an option screen
9 presented to the user on the wireless device, the consumer selects the "recommended gift
10 ideas" service 72. The user is prompted to and enters an occasion for which a gift is to be
11 purchased 74. The consumer is then requested to enter the profile of a gift recipient 76 as
12 well as the price range desired to be spent by the consumer 78.

13 Using an internal demographic database and listing of possible items to purchase that
14 are located within the specific store in which the consumer is located, the server searches for
15 possible gift ideas 80. The gift ideas are then transmitted to the consumer's wireless device
16 82.

17 After receiving ideas of gifts to be given, the consumer can explore those items within
18 the store 84 and select the desired gift to be given 86. The selection is done electronically
19 using the consumer's wireless shopping device. The consumer is then prompted to, and
20 enters information relating to the type of gift wrap, greeting card message desired by the
21 consumer 88. The consumer then finalizes the order for the gift 90, and is prompted to enter
22 information relating to the delivery address and method 92.

23 Referring to Figure 5A, the process flow for creation of "wish lists" and "gift
24 registries" is illustrated. A consumer again enters a specific store 50 and logs onto the system
25 of the present invention using the wireless shopping device 52. The consumer then selects
26 list creation services 94. The user is then prompted to enter the specific type of list that the
27 user wants to create 96. For example, the list may be a private list to simply remind the
28 consumer of types of things that the consumer would like to purchase. Alternatively, the list
29 may be a public list so that regardless of the occasion, the list could be accessed by others
30 who might wish to purchase certain goods for the consumer. Further, an occasion registry
31 may be established whereby the consumer can establish a wedding, birthday, or other
32 occasion registry where desired gifts can be registered as well as the fact that other
33 individuals have purchased certain of the gifts on the list.

1 Once the specific type of list is created, the user enters the product identifier codes of
2 the desired goods which are to be placed on the list 98. After establishing the initial list, the
3 consumer logs off the system 100.

4 It should be noted that the list services can be augmented at any time that the
5 consumer desires. By virtue of allowing specific access by a specific consumer, the list can
6 be updated with additional gifts, certain gifts can be taken off the list, and the list can be
7 changed as desired by the consumer.

8 Referring to Figure 5B, the process of having a designated shopper shop for the
9 consumer is illustrated. Often, the consumer cannot or does not want to shop himself. For
10 instance, a boss may send his assistant to buy office gifts. The designated shopper process is
11 useful for a parent to send a child shopping, yet retain control over what the child buys. The
12 present invention allows the consumer to have a designated shopper choose all the desired
13 items. Then, the consumer approves the list and pays for the items.

14 The designated shopper goes to a retail store 120. The designated shopper can choose
15 various items and enter the UPC codes of all the items to be bought 122. Goods are entered
16 into the consumer's electronic shopping cart 58. The designated shopper is prompted to enter
17 any delivery address and shipping methods if the items are to be mailed 92. The designated
18 shopper is further prompted to enter information relating to the type of gift wrap, greeting
19 card message desired by the consumer 88.

20 Once the designated shopper compiles the full purchase list, he transmits the list from
21 his wireless shopping device, over the wireless network to the consumer's wireless shopping
22 device 60. The consumer logs in to the server 52 and reviews the shopping list the designated
23 shopper has compiled. The consumer adds or deletes items, if desired, and approves the
24 purchases 124. Once the purchase list is approved, the server connects to and notifies the
25 merchants that the consumer authorized charges for the purchases 64. The merchant server
26 processes the request 126. The server notifies both the consumer and the designated shopper
27 on their wireless shopping devices of the purchase result 128. Then, the designated shopper
28 may pick up the items, or perform whatever action is required 130. For instance, if a problem
29 occurred in completing the transaction, the designated shopper attempts to solve the problem.

30 Referring to Figure 5C, the process of creating and using private gift lists is
31 illustrated. Buying a gift for another person can be very difficult when one is not sure
32 whether the recipient will truly like the gift. The wireless shopping device of the present
33 invention allows the consumer to create a list of potential gifts for a recipient, and let the
34 recipient choose which item he or she would like.

1 The consumer enters a specific store 50 and logs onto the system of the present
2 invention using the wireless device 52. The consumer selects products as "gift candidates"
3 that he is willing to buy for the recipient. The consumer enters the UPC code of gift
4 candidates into the wireless shopping device 140. The consumer further enters the UPC code
5 of other gift candidates from other store locations 142. Such a situation would arise if the
6 consumer is in a mall, for instance, and chose some items from department store A and some
7 items from department store B. Once the consumer compiles the aggregate list, he sends it to
8 the recipient's wireless shopping device 144. The recipient views the list and chooses the
9 item he or she would like to have as a gift 146. The recipient's selection is transmitted back
10 to the consumer's wireless shopping device 148.

11 Next, the consumer approves the purchase of the item the recipient selected from the
12 gift candidate list 124. The server receives the consumer's desired choice and connects to the
13 merchant's server 64. The merchant server processes the consumer's request 66 and the
14 consumer is notified of the results 68. The consumer then acts on the result by purchasing the
15 goods and services electronically using credit instruments known in the art 70.

16 Referring to Figure 6, use of the "yellow pages" services of the present invention to
17 locate stores that sell desired goods is illustrated. A consumer who is located in a specific
18 geographic area but not in a specific store 101 logs onto the system of the present invention
19 using the wireless shopping device 52. The consumer's location is determined by the server
20 location program 102. As noted above, such a program is fed information by RF location,
21 triangulation, GPS information, or other location means known in the art.

22 Location information is sent to the server of the present invention 104. The consumer
23 then enters a search range in miles or parts of miles 106. This search range indicates to the
24 server the distance that the consumer is willing to travel from the consumer's present location
25 in order to obtain certain desired goods. The consumer then enters the goods desired in
26 general or specific categories 108. The server then searches its database of stores and goods
27 located in stores to determine where the desired goods are located, within the mileage range
28 specified by the consumer 110.

29 Once the goods are located in a specific store, the store identity and location is sent to
30 the wireless shopping device 112. The consumer can then proceed to the store to complete
31 the transaction as noted in earlier figures 114.

32 Other Benefits

33 In addition to benefits to consumers and merchants, there are yet other "fallout"
34 benefits of the present invention. In many regions, cellular and wireless use on weekends and

1 evenings and other off-peak hours is minimal. It costs wireless operators much money to
2 keep networks running even when demand is low. Since much shopping occurs on
3 weekends, when wireless volume is typically lower than during business hours on a weekday
4 (i.e. time of peak usage), the system of the present invention encourages wireless device use
5 for a new purpose. Not only does this help retailing, but it also generates added revenue for
6 wireless operators since higher bandwidth utilization now occurs on weekends as a result of
7 use of the present invention.

8 Thus any entity running the present invention can generate revenue via merchant
9 subscribers to the service offered. Wireless operators can make more money via their service
10 and possibly provide a portion of that revenue to the entity operating the present invention.

11 A preferred embodiment of the present invention includes a user interface (UI) and
12 presentation layer on the wireless device that is set on top of a search engine and supports
13 performing and displaying results of searches within a merchant's database for products,
14 prices, offered promotions and related information.

15 The UI preferably incorporates a 2-dimensional search and display style, as illustrated
16 in **figures 7A-D and 8A-D**, that is offered over any the wireless shopping devices, including
17 PDAs and cell phones, but which can also be a 1-dimensional display for devices with limited
18 screen size, such as cell phones. **Figures 7A-D and 8A-D** illustrate the UI on a PDA screen
19 that supports a 2-dimensional display view.

20 As shown in the figures, a first dimension lays a list of product categories and the
21 keyword search options. A second dimension lays three product attributes menus, such as but
22 not limited to, price, brand and promotions. Under each of these menus are values for the
23 corresponding attributes, such as but not limited to, price ranges, brand names and
24 promotions currently offered by the merchant.

25 At the start, all products in the merchant's database are available to be searched and
26 hence, include all product categories, all price ranges, all brand names and all promotions.
27 **Figure 7A** shows a display for the Gap® having 8067 products split into the product
28 categories of "Men" and "Women" products. **Figure 8A** likewise shows a display for the Best
29 Buy® Home Audio & Video having 25 products split into the product categories of
30 "Camcorders," "DVD Players," and "VCR" products.

31 To perform a search, the user starts with any attribute or search option, makes a
32 selection and proceeds with other attributes and selections in no particular order. At any time
33 the user makes a selection, that narrows down the products available to be searched based on
34 that selection. In **figure 7B**, the search has been narrowed using the keyword "khaki" to

1 thereby reduce the number of products to 6244 items. In **figure 8B**, the search has been
2 narrowed using the keyword "digital." Since there are no digital VCR's, the product
3 categories are updated, in addition to the number of products being reduced to 17, to
4 eliminate the "VCR" category.

5 **Figure 7C** illustrates the further product refinement caused by selecting the "Men"
6 category and the \$30-\$39.99 price range. In **figure 8C**, the further refinement is caused by
7 selection of the \$730-\$1099.00 price range. This process continues until reaching the desired
8 list of products and a "Show Listings" button is displayed, as illustrated in **figures 7D** and
9 **8D**. In this presentation, the product categories displayed at any screen would depend on
10 how far in the search process the subscriber has reached. Also, the sequence of selections
11 made so far by the subscriber is shown at all times for reference, as well as a "Home" button
12 to begin a new search.

13 As in the examples above, the user may start by entering a keyword. Now, all
14 products in the database except those matching the keyword are eliminated and the product
15 categories, prices, brand names, and promotions available to select from get reduced to those
16 applicable to the remaining products. Next, the user may proceed by drilling down through
17 the product categories and sub-categories. Similarly, after every selection, more products get
18 eliminated and the product categories, prices, brand names, and promotions available to
19 select from get reduced further to those applicable to the remaining products. At some point,
20 s/he may select promotions and is presented with a list of promotions offered only on the
21 remaining products. Upon selecting a specific promotion, that would further narrow down
22 the search results to products available for that promotion. Similarly, the user may select
23 price or brand, which would narrow the search results based on the selection. Alternatively,
24 the user may start with promotions and select one of all the promotions offered by the
25 merchant. Further searches would result in searching only within products available for that
26 promotion.

27 The present invention, as illustrated in **figure 9**, can be practiced in many different
28 embodiments. At a basic level, the invention comprises system for wireless purchase of
29 products and services, comprising a system server **900**, a wireless communication means **910**
30 connected to said system server **900** for communicating with a plurality of consumer wireless
31 devices **920**, at least one merchant database **932** for each merchant **930** connected to said
32 system server **900** and comprising data related to products and services available for purchase
33 from said merchant, a consumer database **902** connected to said system server **900** and
34 comprising consumer profile **904** data, means **940** for determining a location of said

1 consumer wireless devices, and means at said system server 900 for completing a purchase
2 transaction for a product or service between a consumer and a merchant based on wireless
3 communication between said system server 900 and a consumer wireless device 920.

4 In one embodiment, the consumer wireless devices 920 can be provided by a
5 merchant to customers inside a merchant store 950 location. Such an arrangement could use a
6 cellular telephone-type wireless network 910 that communicates with the system server 900
7 over the Internet 905 or could use a local wireless network 916 that uses shorter-range RF,
8 such as IEEE 802.11, that communicates directly with a system server located in the store.

9 In a more typical embodiment, the consumer wireless devices 920 are selected from
10 the group consisting of personal digital assistants (PDAs) and cell phones. The consumer
11 wireless devices 920 include means for inputting product or service identifiers, such as
12 scanners, keypads, touchscreens, cameras, and voice-recognition devices.

13 Typically, the wireless communication means 910 connected to said system server
14 900 will include a wireless server 912 having a radio frequency (RF) link 914 to said
15 consumer wireless devices 920 and an Internet connection to said system server 900.

16 Typical means 940 for determining a location of said consumer wireless devices 920
17 include RF-triangulation means 922, GPS-based means 924, differential GPS-based means
18 926, and consumer-supplied input, such as by zip-code or cross-streets.

19 A fulfillment center 960 carrying inventory 962 can be connected to the system server
20 900, usually via the Internet 905 to provide for centralized inventory and a simpler supply
21 chain. Consumers can order from anywhere, but will typically enter a merchant store 950
22 location for viewing products or receiving services. Store 950 locations include a point-of-
23 sale (POS) terminal 952 for accepting an authorization 955 from a consumer wireless device
24 920 of a purchase transaction. As used herein, a POS terminal 952 can include a typical
25 check-out register or a system designed specifically for an express checkout using the present
26 invention, such as one that doesn't necessarily need a cash drawer, credit card reader, or
27 cashier, but only a means for identifying the goods/services and a means for accepting the
28 server-supplied authorization from the wireless device.

29 Registered Internet portal servers 980 can be connected to the system server 900 over
30 the Internet 905 for exchanging portal consumer account information 982 or portal merchant
31 information 984 with said system server.

32 Consumers can connect to the system server 900 over the Internet 905 using a
33 consumer computer 990 or consumer wireless device 920 for creating consumer profiles,
34 checking delivery status, creating shopping lists, etc.

1 The system server 900 stores transaction data for various purposes. Consumers can access
2 purchase histories for reordering products. Data mining means 908 associated with said
3 system server 900 can analyze transaction data 906, as well as consumer profiles 904, to
4 provide marketing data. The present invention allows the measurement of consumer
5 shopping behavior across multiple merchants by including consumer profile data related to
6 consumer desired products and consumer action on desired products. It also allows for adding
7 desired products to said consumer profile, cross referencing the data with consumer account
8 and demographic information, and generating reports predicting consumer shopping behavior
9 based on collected and stored historical data about said consumer.

10 The basic process of the present invention comprises registering consumer profiles
11 with the system server 900 and storing said consumer profiles on the database 902,
12 registering merchants with the system server 900 and providing access to a merchant
13 inventory database 932, wirelessly communicating with consumer wireless devices 920 to
14 determine consumer location and identify products or services to be purchased, and
15 completing the purchase transaction based on wireless communications between the system
16 server 900 and said consumer wireless device 920. When the consumer wireless devices 920
17 are provided to consumers at a particular merchant store 950 location for use in said store, the
18 consumer can register using the consumer wireless device 920 if they are not already
19 registered.

20 Regardless of who supplies the consumer wireless devices 920, they can be used to
21 identify products or services to be purchased by having the consumer input product
22 identifiers into said consumer wireless device at a merchant store 950, usually after viewing
23 and touching an actual example of the product.

24 In one embodiment, the consumer can take the product with them by having the
25 system server 900 supply an authorization code 955 for the transaction to said consumer
26 wireless device 920 and then supplying the authorization code 955 to a point-of sale (POS)
27 terminal 952 to receive said products or services. In alternate embodiments, the consumer can
28 elect to have the product gift wrapped and can elect diverse delivery options, such as having
29 it held for later pickup at the merchant store 950 location, having it delivered to their home,
30 having it delivered to an alternate location, such as a gift recipient's address, etc.

31 Merchants can directly register with the system server 900 or have an Internet portal
32 associated with the merchant register the merchants and provide access to a merchant
33 inventory database. Likewise, consumers have various registration options, such as by having
34 an Internet portal having participating consumer account register the consumer's consumer

1 profiles with the system server 900 and storing said consumer profiles on the database 902.
2 Consumer registration can also be performed directly by the consumer via consumer
3 computer 990 or consumer wireless device 920 connected to the system server 900 over the
4 Internet 905. Registering can also be streamlined by selecting another Internet account from
5 which to import stored account data and entering authentication data for said Internet
6 account.

7
8 During a typical transaction, the system server 900 will determine availability and
9 price of the product or service from the merchant database 932. A price can also be set by
10 negotiating a price for the transaction by various methods, such as auction bidding,
11 competitor-price matching, volume-purchase discounting, buying group discounting,
12 preferred customer discounting, electronic-coupon discounting, (customer) offer- (merchant)
13 acceptance, etc. Payment for the transaction can be selected from various methods, including,
14 but not limited to, using a predetermined payment method stored in their consumer profile,
15 using a payment account input by the consumer into said consumer wireless device, and
16 using a selected Internet-based electronic wallet.

17 The system server 900 can assist the consumer in finding a desired item in many
18 ways. When in a merchant store 950, the consumer can input a request for a location of
19 certain product within the store and transmit said request to the system server 900, which
20 accesses a merchant database to determine a department or aisle location where the product
21 should be located and transmits the department or aisle location to the consumer wireless
22 device 920.

23 The system server 900 can also suggest items to be purchased based on a variety of
24 criteria, such as a wish list stored in the consumer profile, a shopping list stored in the
25 consumer profile, a wish list linked to the consumer profile, a gift registry linked to the
26 consumer profile, system server analysis of the consumer profile, system server analysis of
27 the recipient profile data supplied by the consumer, system server analysis of a recipient's
28 linked consumer profile, and by system server analysis of other items typically purchased
29 with a previously selected item (e.g., if a bicycle is being purchased, the server can also
30 suggest a helmet, lock, and water bottle).

31 The system server 900 can also aid the consumer by supplying reviews of products or
32 services desired to be purchased, supplying sale information, supplying lists of popular items
33 purchased by those with similar profiles, suggesting other similar products or services from
34 the merchant, locating the same or other similar products or services from nearby registered

1 merchants, locating the same product or service at a lower price from a registered merchant,
2 locating other similar products most often purchased by registered consumers, and locating
3 other similar products most highly rated by registered consumers or other rating sources.

4 The system server 900 can also aid the consumer by acting in a "yellow pages"
5 capacity, wherein the consumer logs into the system server 900 via said wireless device 920,
6 supplies data used to determine consumer location, selects products or services desired to be
7 purchased, selects a desired geographic range, and the system server 900 searches merchant
8 databases to determine possible merchants within the geographic range offering the selected
9 products or services and transmits relevant data to said consumer wireless device 920 to assist
10 in locating the products or services purchased. The search request can also include a desired
11 merchant name. Additionally, relevant sale incentive data can be sent to the consumer.

12 Alternate methods of employing the present invention include having the consumer
13 log into the system server 900 using an existing wireless service provider account or Internet
14 portal account or having the consumer connecting to said system server, select a login using
15 an existing wireless service provider account or Internet portal account, enter authentication
16 data for the existing wireless service provider account or Internet portal account, and use a
17 wallet from the existing wireless service provider account or Internet portal account to
18 complete the purchase transaction.

19 In another embodiment, the system server 900 can detect a consumer wireless device
20 920 on a wireless network 910, determine the geographic location of the consumer wireless
21 device 920, determine the availability of (i) merchant-specific offers, (ii) products or services
22 matching products or services stored in said consumer profile, or (iii) product or service
23 offers appropriate to demographic information and/or interests stored in said consumer
24 profile 904, within an area adjacent the determined geographic location, and transmit the
25 available merchant-specific offers to the consumer wireless device 920.

26 In another embodiment of the present invention, when the system server 900
27 determines that a product or service is not available from a merchant, the consumer can
28 request the system server to determine if said product or service is available from an
29 alternative source.

30 The present invention also allows the consumer to create a "buddy list" for storage in
31 their consumer profile. The buddy list includes at least one buddy name, whether actual or a
32 nickname, and an associated e-mail address or the like. Once a buddy has been added, the
33 consumer can use the consumer wireless device 920 to direct the system server 900 to notify
34 a selected buddy with information such as text messages (e.g., instant messages, SMS, etc.),

1 details of selected buying groups, and details of other selected purchase opportunities such as
2 sales, gifts ideas, etc.

3 In one embodiment of the present invention, the consumer completes the transaction
4 using a single authorizing action, i.e., by a "1-click" method. This can be done by (i) having
5 all necessary information stored in the consumer profile 904 on said system server 900 (an
6 Amazon.com model), (ii) having all necessary information stored in the consumer wireless
7 device 920 (a Vodaphone model) and transmitting it with said authorizing action, or (iii)
8 having a first portion of the necessary information stored in the consumer profile 904 on the
9 system server 900 and a remaining portion of the necessary information stored in the
10 consumer wireless device 920 and transmitted with said authorizing action.

11 In another embodiment, the system server 900 stores transaction data 906 for each
12 consumer as an order history. By providing consumers access to the transaction history,
13 consumers can identify products or services for purchase by selecting the product or service
14 from the order history, thereby facilitating repeat purchasing.

15 Another aspect of the present invention allows consumers to start buying groups using
16 their wireless devices 920. The consumer requests initiation of a buying group for a product
17 or service with said merchant using the consumer wireless device 920. The merchant can then
18 accept said buying group by setting an initial price, setting a time period, agreeing to lower
19 said price based on a volume of purchases through said buying group, and agreeing to sell the
20 product or service at a conclusion of the time period to all members of the buying group at a
21 final, lowered price.

22 As used herein, the term "merchant" applies to any entity supplying goods or services,
23 including retailers and manufacturers. The term "consumer" applies to any entity purchasing
24 goods or services, including individuals, groups, organizations and businesses. The term
25 "Internet fulfillment center" applies to any remote inventory facility that ships goods,
26 including facilities operated by manufacturers and facilities carrying the goods of multiple
27 manufacturers.

28 A system and method for the wireless purchases of goods and service has now been
29 illustrated. It will become apparent to those skilled in the art that the wireless shopping
30 devices can take many forms from PDA's to cellular telephones with some added
31 capabilities. The added capabilities may be inherent in the wireless devices or be add-on
32 modules to those wireless devices.

33

1 We Claim:

- 2 1. A system for wireless purchase of products and services, comprising:
3 a system server;
4 a wireless communication means connected to said system server for communicating
5 with a plurality of consumer wireless devices;
6 at least one merchant database connected to said system server and comprising data
7 related to products and services available for purchase from said merchant;
8 a consumer database connected to said system server and comprising consumer
9 profile data;
10 means for determining a location of said consumer wireless devices; and
11 means at said system server for completing a purchase transaction for a product or
12 service between a consumer and a merchant based on wireless communication between said
13 system server and a consumer wireless device.
- 14 2. The system of claim 1, wherein said consumer wireless devices are provided by a
15 merchant to customers inside a merchant store location.
- 16 3. The system of claim 1, wherein said consumer wireless devices are selected from the
17 group consisting of personal digital assistants (PDAs) and cell phones.
- 18 4. The system of claim 1, wherein said consumer wireless devices include means for
19 inputting product or service identifiers.
- 20 5. The system of claim 4, wherein means for inputting product or service identifiers is
21 selected from the group consisting of scanners, keypads, touchscreens, cameras, and voice-
22 recognition devices.
- 23 6. The system of claim 1, wherein said wireless communication means connected to said
24 system server comprises a wireless server having a link to said consumer wireless devices
25 selected from the group consisting of radio frequency (RF) links and infra red (IR) links.
- 26 7. The system of claim 6, wherein said wireless communication means connected to said
27 system server further comprises an Internet connection to said system server.
- 28 8. The system of claim 1, wherein said means for determining a location of said
29 consumer wireless devices is selected from the group consisting of RF-triangulation means,
30 GPS-based means, differential GPS-based means, and consumer-supplied input.
- 31 9. The system of claim 1, further comprising a fulfillment center connected to said
32 system server.
- 33 10. The system of claim 9, wherein said fulfillment center has an Internet connection to
34 said system server.

- 1 11. The system of claim 1, further comprising a merchant store location for viewing
2 products or receiving services.
- 3 12. The system of claim 11, further comprising a point-of-sale (POS) terminal for
4 accepting an authorization from said consumer wireless device of said purchase transaction.
- 5 13. The system of claim 1, further comprising an Internet portal server, wherein said
6 portal server is connected to said system server over the Internet and is registered with said
7 system server for exchanging portal consumer account information with said system server.
- 8 14. The system of claim 1, further comprising a consumer computer or consumer wireless
9 device connected to said system server and said system server including software instructions
10 for creating consumer profiles based on communication with said consumer computer or
11 consumer wireless device.
- 12 15. The system of claim 1, further comprising means associated with said system server
13 for storing transaction data.
- 14 16. The system of claim 15, further comprising data mining means associated with said
15 system server for analyzing transaction data and consumer profiles.
- 16 17. The system of claim 1, further comprising means to check delivery status associated
17 with said means at said system server for completing a purchase transaction.
- 18 18. The system of claim 1, further comprising an Internet portal server, wherein said
19 portal server is connected to said system server over the Internet and is registered with said
20 system server for exchanging portal merchant information with said system server.
- 21 19. The system of claim 1, wherein said consumer wireless devices have built-in means
22 for wireless communications.
- 23 20. A process for wireless purchasing of products and services, comprising:
24 registering consumer profiles with a system server and storing said consumer profiles
25 on a database;
26 registering merchants with said system server and providing access to a merchant
27 inventory database;
28 wirelessly communicating with consumer wireless devices to determine consumer
29 location and identify products or services to be purchased; and
30 completing a purchase transaction for a product or service between a consumer and a
31 merchant based on wireless communications between said system server and said consumer
32 wireless device.
- 33 21. The process of claim 20, further comprising providing said consumer wireless devices
34 to consumers at a particular merchant store location for use in said merchant store.

- 1 22. The process of claim 20, further comprising selecting said consumer wireless devices
2 from the group consisting of PDAs and cell phones.
- 3 23. The process of claim 20, further comprising inputting product or service identifiers
4 into said consumer wireless device.
- 5 24. The process of claim 23, wherein said inputting step is a step selected from the group
6 consisting of scanning a code, operating a keypad, engaging a touchscreen, imaging with a
7 camera, and speaking.
- 8 25. The process of claim 20, further comprising using a wireless server having a link to
9 said consumer wireless devices to provide said wireless communicating selected from the
10 group consisting of RF links and IR links.
- 11 26. The process of claim 25, further comprising connecting said wireless server to said
12 system server over the Internet.
- 13 27. The process of claim 20, wherein said wireless communicating with consumer
14 wireless devices is by radio frequency (RF) communication and wherein said wireless
15 communicating with consumer wireless devices determines location by a method selected
16 from the group consisting of RF-triangulation of said consumer wireless device, transmission
17 of GPS coordinates from said consumer wireless device, and transmission of consumer
18 supplied data.
- 19 28. The process of claim 20, further comprising delivering purchased products from a
20 fulfillment center.
- 21 29. The process of claim 28, further comprising delivering fulfillment center instructions
22 from said system server to said fulfillment center over the Internet.
- 23 30. The process of claim 20, wherein the step of wirelessly communicating with
24 consumer wireless devices to identify products or services to be purchased comprises said
25 consumer inputting product identifiers into said consumer wireless device at a merchant
26 store.
- 27 31. The process of claim 30, wherein the step of completing a purchase transaction further
28 comprises:
- 29 supplying an authorization code for said transaction from said system server to said
30 consumer wireless device; and
- 31 supplying said authorization code to a point-of sale (POS) terminal to receive said
32 products or services.

- 1 32. The process of claim 20, further comprising registering an Internet portal having
2 participating merchants as a means of registering merchants with said system server and
3 providing access to a merchant inventory database.
- 4 33. The process of claim 20, further comprising registering an Internet portal having
5 participating consumer account as a means of registering consumer profiles with said system
6 server and storing said consumer profiles on a database.
- 7 34. The process of claim 20, wherein said step of registering consumer profiles with a
8 system server is performed by a consumer via a personal computer or consumer wireless
9 device connected to said system server over the Internet.
- 10 35. The process of claim 20, further comprising storing of said transaction data by said
11 system server.
- 12 36. The process of claim 35, further comprising mining data by analyzing said transaction
13 data and said consumer profiles.
- 14 37. The process of claim 20, wherein the step of wirelessly communicating with
15 consumer wireless devices to determine consumer location and identify products or services
16 to be purchased comprises the steps of:
- 17 a consumer entering a merchant location;
18 said consumer logging into said system server via said consumer wireless device and
19 supplying data used to determine consumer location;
20 said consumer selecting products or services desired to be purchased from said
21 merchant; and
22 said consumer inputting a product or service identifier into said consumer wireless
23 device and wirelessly transmitting said identifier to said system server.
- 24 38. The process of claim 37, wherein said data used to determine consumer location is
25 selected from consumer-supplied information, consumer wireless device-supplied GPS
26 information, and RF transmissions received for triangulation.
- 27 39. The process of claim 37, wherein the step of completing a purchase transaction
28 between a consumer and a merchant further comprises:
29 said system server determining availability and price of said product or service from
30 said merchant database.
- 31 40. The process of claim 37, wherein the step of wirelessly communicating with
32 consumer wireless devices to identify products or services to be purchased further comprises:
33 said consumer inputting a request for a location of certain product within said store
34 and transmitting said request to said system server via said consumer wireless device;

1 said system server accessing said merchant database to determine a department or
2 aisle location where said product should be located and transmitting said department or aisle
3 location to said consumer wireless device.

4 41. The process of claim 39, wherein the step of completing a purchase transaction further
5 comprises negotiating a price for the transaction by a method selected from the group
6 consisting of auction bidding, competitor-price matching, volume-purchase discounting,
7 buying group discounting, preferred customer discounting, electronic-coupon discounting,
8 and offer-acceptance.

9 42. The process of claim 37, wherein the step of completing a purchase transaction further
10 comprises providing payment by a method selected from using a predetermined payment
11 method stored in said consumer profile, using a payment account input by said consumer into
12 said consumer wireless device, and using a selected Internet-based electronic wallet.

13 43. The process of claim 37, wherein the step of completing a purchase transaction further
14 comprises selecting a delivery method from a group consisting of Internet fulfillment to a
15 predetermined address stored in said consumer profile, Internet fulfillment to an address input
16 into said consumer wireless device, immediate store fulfillment, and deferred store
17 fulfillment.

18 44. The process of claim 43, wherein said Internet fulfillment or store fulfillment further
19 comprises gift-wrapping.

20 45. The process of claim 37, wherein the step of wirelessly communicating with
21 consumer wireless devices to identify products or services to be purchased further comprises
22 said system server suggesting items to be purchased based on a means selected from a group
23 consisting of a wish list stored in said consumer profile, a shopping list stored in said
24 consumer profile, a wish list linked to said consumer profile, a gift registry linked to said
25 consumer profile, system server analysis of said consumer profile, system server analysis of
26 recipient profile data supplied by said consumer, system server analysis of a recipient's linked
27 consumer profile, and system server analysis of other items typically purchased with a
28 previously selected item.

29 46. The process of claim 37, wherein the step of wirelessly communicating with
30 consumer wireless devices to identify products or services to be purchased further comprises:
31 said consumer requesting a review of products or services desired to be purchased
32 from said system server; and
33 said system server delivering a review of said products or services to said consumer
34 wireless device.

- 1 47. The process of claim 37, wherein the step of wirelessly communicating with
2 consumer wireless devices to identify products or services to be purchased further comprises
3 said system server determining and transmitting to said consumer wireless device alternate
4 products or services selected from the group consisting of other similar products or services
5 from said merchant, the same or other similar products or services from nearby registered
6 merchants, the same product or service at a lower price from a registered merchant, other
7 similar products most often purchased by registered consumers, and other similar products
8 most highly rated by registered consumers or other rating sources.
- 9 48. The process of claim 20, wherein the step of completing a purchase transaction further
10 comprises providing payment by a method selected from using a predetermined payment
11 method stored in said consumer profile, using a payment account input by said consumer into
12 said consumer wireless device, and using a selected Internet-based electronic wallet.
- 13 49. The process of claim 20, wherein the step of completing a purchase transaction further
14 comprises selecting whether or not to have the purchase gift wrapped and selecting a delivery
15 method from a group consisting of Internet fulfillment to a predetermined address stored in
16 said consumer profile, Internet fulfillment to an address input into said consumer wireless
17 device, immediate store fulfillment, and deferred store fulfillment.
- 18 50. The process of claim 20, wherein the step of wirelessly communicating with
19 consumer wireless devices to identify products or services to be purchased further comprises
20 said system server suggesting items to be purchased based on a means selected from a group
21 consisting of a wish list stored in said consumer profile, a shopping list stored in said
22 consumer profile, a wish list linked to consumer profile, a gift registry linked to said
23 consumer profile, system server analysis of said consumer profile, system server analysis of
24 recipient profile data supplied by said consumer, system server analysis of a recipient's linked
25 consumer profile, and system server analysis of other items typically purchased with a
26 previously selected item.
- 27 51. The process of claim 20, wherein the step of wirelessly communicating with
28 consumer wireless devices to determine consumer location and identify products or services
29 to be purchased further comprises:
- 30 said consumer logging into said system server via said consumer wireless device and
31 supplying data used to determine consumer location;
- 32 said consumer selecting products or services desired to be purchased;
- 33 said consumer selecting a desired geographic range; and

1 said system server searching merchant databases to determine possible merchants
2 within the geographic range offering the selected products or services and transmitting
3 relevant data to said consumer wireless device to assist in locating said products or services
4 purchased.

5 52. The method of claim 51, further comprising said system server transmitting relevant
6 sale incentive data to said consumer wireless device.

7 53. The process of claim 51, wherein said data used to determine consumer location is
8 selected from consumer-supplied information, consumer wireless device-supplied GPS
9 information, and RF transmissions received for triangulation.

10 54. The process of claim 51, wherein the step of completing a purchase transaction
11 between a consumer and a merchant further comprises:

12 said system server determining availability and price of said product or service from
13 said merchant database.

14 55. The process of claim 51, wherein the step of wirelessly communicating with
15 consumer wireless devices to identify products or services to be purchased further comprises:

16 said consumer entering a merchant store location;

17 said consumer inputting a request for a location of a certain product within said store
18 and transmitting said request to said system server;

19 said system server accessing said merchant database to determine a department or
20 aisle location where said product should be located and transmitting said department or aisle
21 location to said consumer wireless device.

22 56. The process of claim 54, wherein the step of completing a purchase transaction further
23 comprises negotiating a price for the transaction by a method selected from the group
24 consisting of auction bidding, competitor-price matching, volume-purchase discounting,
25 buying group discounting, preferred customer discounting, electronic-coupon discounting,
26 and offer-acceptance.

27 57. The process of claim 51, wherein the step of completing a purchase transaction further
28 comprises providing payment by a method selected from using a predetermined payment
29 method stored in said consumer profile, using a payment account input by said consumer into
30 said consumer wireless device, and using a selected Internet-based electronic wallet.

31 58. The process of claim 51, wherein the step of completing a purchase transaction further
32 comprises selecting a delivery method from a group consisting of Internet fulfillment to a
33 predetermined address stored in said consumer profile, Internet fulfillment to an address input

1 into said consumer wireless device, immediate store fulfillment, and deferred store
2 fulfillment.

3 59. The process of claim 58, wherein said Internet fulfillment or store fulfillment further
4 comprises gift-wrapping.

5 60. The process of claim 51, wherein the step of wirelessly communicating with
6 consumer wireless devices to identify products or services to be purchased further comprises:
7 said consumer requesting a review of products or services desired to be purchased
8 from said system server via said consumer wireless device; and
9 said system server delivering a review of said products or services to said consumer
10 wireless device.

11 61. The process of claim 51, wherein the step of wirelessly communicating with
12 consumer wireless devices to identify products or services to be purchased further comprises
13 said system server determining and transmitting to said consumer wireless device alternate
14 products or services selected from the group consisting of the same product or service at a
15 lower price from a registered merchant, other similar products most often purchased by
16 registered consumers, and other similar products most highly rated by registered consumers
17 or other rating sources.

18 62. The method of claim 20, wherein said step of wirelessly communicating with
19 consumer wireless devices to determine consumer location and identify products or services
20 to be purchased further comprises:

21 locating a merchant store by:
22 said consumer inputting data to define a geographic search area and
23 transmitting a search request including said geographic search data to said system server; and
24 said system server identifying and transmitting data relevant to said search
25 request to said consumer wireless device.

26 63. The method of claim 62, wherein said search request further comprises a desired
27 merchant name.

28 64. The method of claim 20, wherein said step of registering consumer profiles with a
29 system server and storing said consumer profiles on a database comprises a consumer:

30 connecting to said system server over the Internet;
31 establishing an individual consumer profile; and
32 linking said profile to a wireless consumer device.

- 1 65. The method of claim 64, wherein said step of registering is streamlined by selecting
2 another Internet account from which to import stored account data; and entering
3 authentication data for said Internet account.
- 4 66. The method of claim 20, wherein said step of wirelessly communicating with
5 consumer wireless device is accomplished by said consumer logging into said system server
6 using an existing wireless service provider account or Internet portal account.
- 7 67. The method of claim 20, wherein said step of wirelessly communicating with
8 consumer wireless device is accomplished by:
9 said consumer connecting to said system server;
10 selecting a login using an existing wireless service provider account or Internet portal
11 account;
12 entering authentication data for said existing wireless service provider account or
13 Internet portal account; and
14 using a wallet from said existing wireless service provider account or Internet portal
15 account to complete said purchase transaction.
- 16 68. The method of claim 20, wherein said step of wirelessly communicating with
17 consumer wireless device is accomplished by:
18 said system server detecting a consumer wireless device on a wireless network;
19 said system server determining a geographic location of said consumer wireless
20 device;
21 said system server determining the availability of merchant-specific offers within an
22 area adjacent said determined geographic location; and
23 said system server transmitting said available merchant-specific offers to said
24 consumer wireless device.
- 25 69. The method of claim 20, wherein said step of wirelessly communicating with
26 consumer wireless device is accomplished by:
27 said system server detecting a consumer wireless device on a wireless network;
28 said system server determining a geographic location of said consumer wireless
29 device;
30 said system server determining the availability of products or services matching
31 products or services stored in said consumer profile within an area adjacent said determined
32 geographic location; and
33 said system server transmitting said available matching products or services data to
34 said consumer wireless device.

- 1 70. The method of claim 20, wherein said step of wirelessly communicating with
2 consumer wireless device is accomplished by:
3 said system server detecting a consumer wireless device on a wireless network;
4 said system server determining a geographic location of said consumer wireless
5 device;
6 said system server determining the availability of product or service offers appropriate
7 to demographic information and/or interests stored in said consumer profile within an area
8 adjacent said determined geographic location; and
9 said system server transmitting said available matching products or services offers to
10 said consumer wireless device.
- 11 71. The method of claim 20, further comprising:
12 allowing consumers to create a list of products and services;
13 storing said list on said system server; and
14 allowing said consumer to make said list either publicly or privately available.
- 15 72. The method of claim 71, wherein said list is selected from the group consisting of a
16 shopping list, a wish list, and a gift registry.
- 17 73. The method of claim 20, further comprising said consumer checking delivery status
18 using said consumer wireless device.
- 19 74. The method of claim 20, further comprising loading desired products or services into
20 an electronic shopping cart prior to said purchase transaction.
- 21 75. The method of claim 74, wherein a person in possession of said consumer wireless
22 device is a designated shopper of said consumer and further comprising a step of providing
23 said consumer access to said electronic shopping cart for adjustment and approval of said
24 transaction.
- 25 76. The method of claim 20, further comprising:
26 said consumer creating a buddy list for storage in said consumer profile, said buddy
27 list including at least one buddy name and an associated e-mail address; and
28 said consumer directing said system server to notify a selected buddy with
29 information selected from the group consisting of text messages, details of selected buying
30 groups, and details of other selected purchase opportunities.
- 31 77. The method of claim 20, further comprising said consumer completing said
32 transaction using a single authorizing action, wherein all necessary information to complete
33 said transaction is provided by a method selected from the group consisting of having all
34 necessary information stored in said consumer profile on said system server, having all

1 necessary information stored in said consumer wireless device and transmitted with said
2 authorizing action, and having a first portion of all necessary information stored in said
3 consumer profile on said system server with a remaining portion of all necessary information
4 stored in said consumer wireless device and transmitted with said authorizing action.

5 78. The method of claim 20, further comprising:
6 said system server storing said transaction data for each consumer as an order history;
7 providing consumers access to said transaction history; and
8 allowing consumers to identify products or services for purchase by selecting said
9 product or service from said order history.

10 79. The method of claim 20, wherein said wirelessly communicating with consumer
11 wireless devices to identify products or services to be purchased and completing a purchase
12 transaction for a product or service comprises:

13 said consumer requesting initiation of a buying group for a product or service with
14 said merchant via said consumer wireless device; and

15 said merchant accepting said buying group by setting an initial price, setting a time
16 period, agreeing to lower said price based on a volume of purchases through said buying
17 group, and agreeing to sell said product or service at a conclusion of said time period to all
18 members of said buying group at a final, lowered price.

19 80. The method of claim 39, wherein when said server determines that said product or
20 service is not available from said merchant, said consumer requests said server to determine
21 if said product or service is available from an alternative source.

22 81. The method of claim 80, wherein said availability is in-store availability and said
23 alternate source is selected from the group consisting of other stores of said merchant,
24 Internet fulfillment through said merchant, stores of other merchants, and Internet fulfillment
25 through other merchants.

26 82. The method of claim 54, wherein when said server determines that said product or
27 service is not available from said merchant, said consumer requests said server to determine
28 if said product or service is available from an alternative source.

29 83. The method of claim 82, wherein said availability is in-store availability and said
30 alternate source is selected from the group consisting of other stores of said merchant,
31 Internet fulfillment through said merchant, stores of other merchants, and Internet fulfillment
32 through other merchants.

- 1 84. The method of claim 74, wherein said consumer fills said shopping cart with gift
2 items for a recipient and further comprising a step of providing said recipient access to said
3 electronic shopping cart for adjustment prior to said consumer approving said transaction.
- 4 85. The method of claim 84, wherein said shopping cart is filled with products or services
5 from multiple merchants.
- 6 86. The method of claim 75, wherein said shopping cart is filled with products or services
7 from multiple merchants.
- 8 87. The method of claim 71, wherein said list is populated with products or services from
9 multiple merchants.
- 10 88. The system of claim 16, wherein said data mining means measures consumer
11 shopping behavior across multiple merchants by including consumer profile data related to:
12 consumer desired products; and
13 consumer actions on desired products;
14 and further comprising means for adding desired products to said consumer profile,
15 cross referencing with consumer account and demographic information, and generating
16 reports predicting consumer shopping behavior based on collected and stored historical data
17 about said consumer.
- 18 89. The method of claim 36, further comprising measuring consumer shopping behavior
19 across multiple merchants by including consumer profile data related to:
20 consumer desired products; and
21 consumer actions on desired products;
22 and further comprising adding desired products to said consumer profile, cross
23 referencing with consumer account and demographic information, and generating reports
24 predicting consumer shopping behavior based on collected and stored historical data about
25 said consumer.

26
27

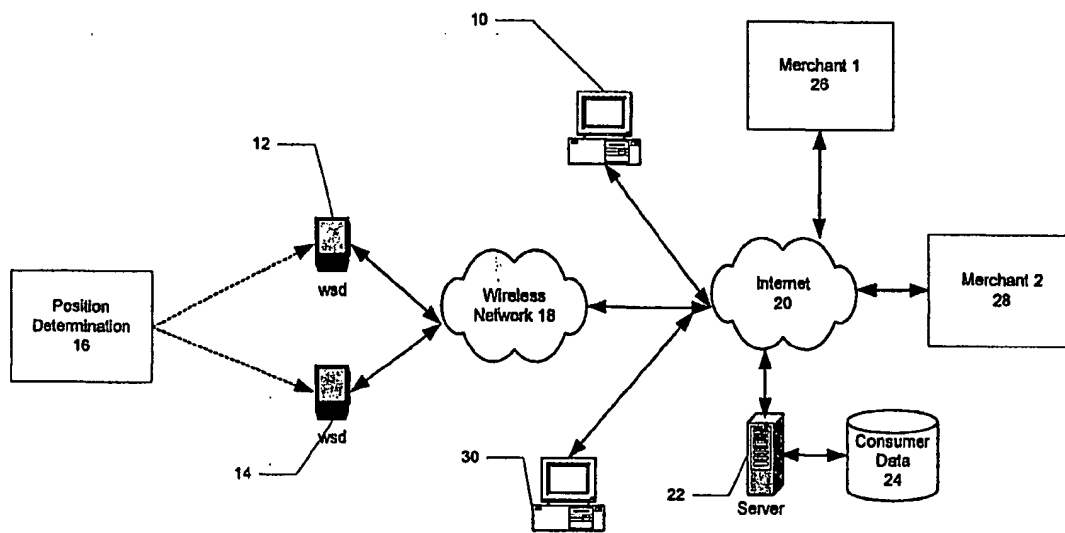


Figure 1

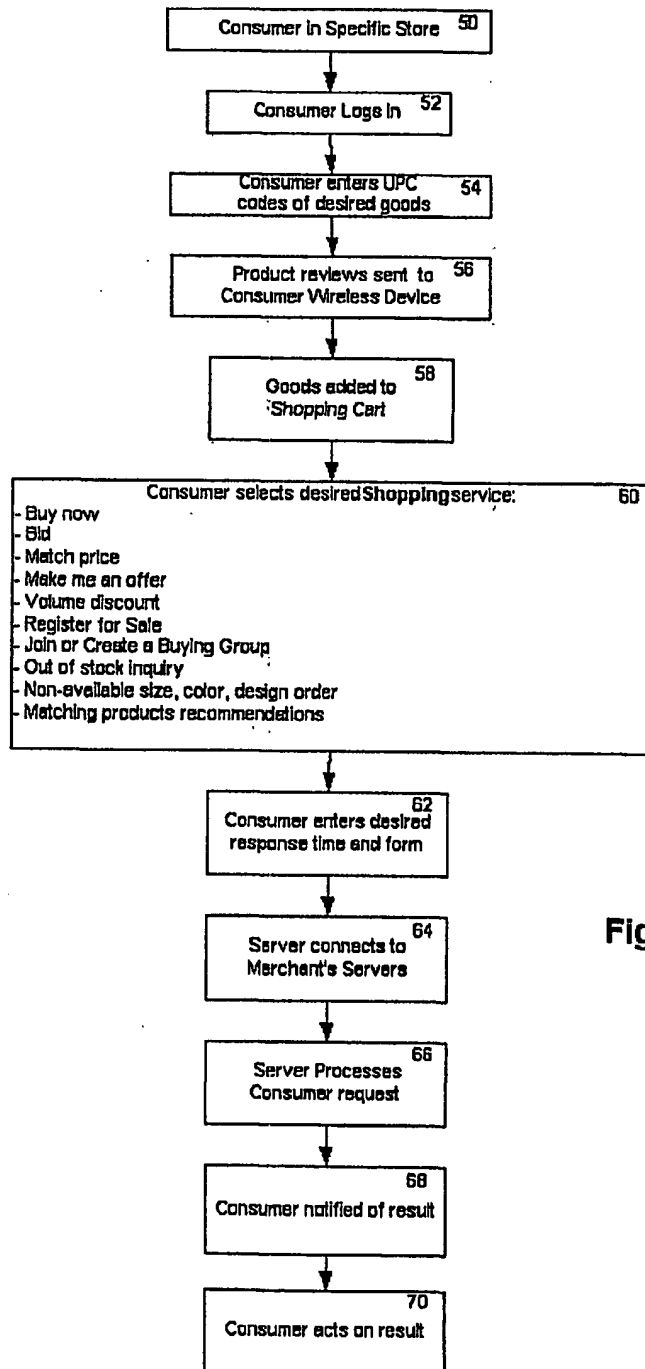


Fig 2

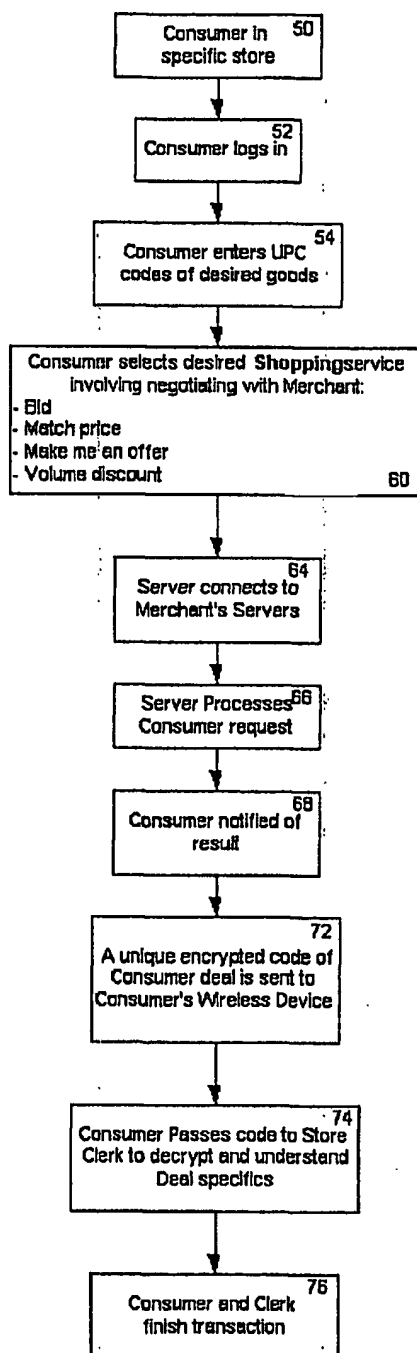


Fig. 3

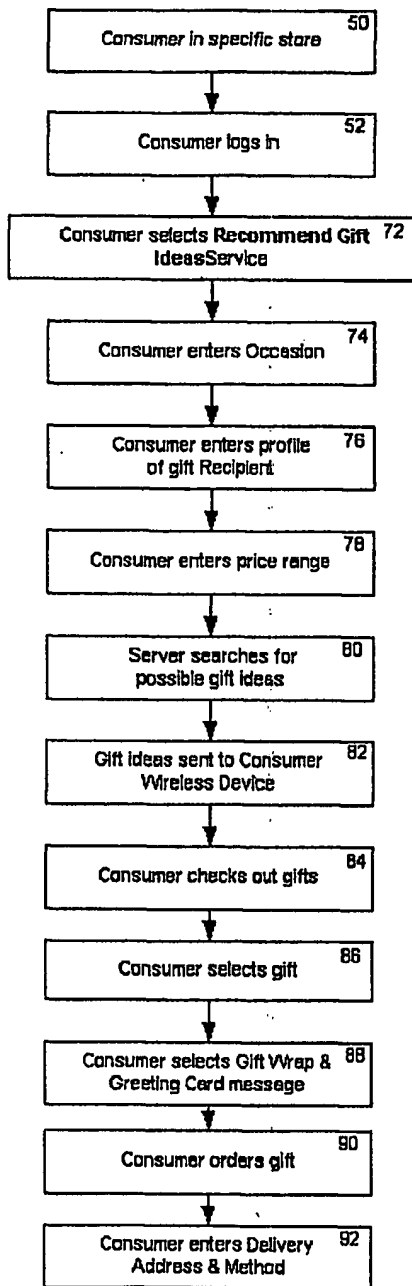


Fig. 4

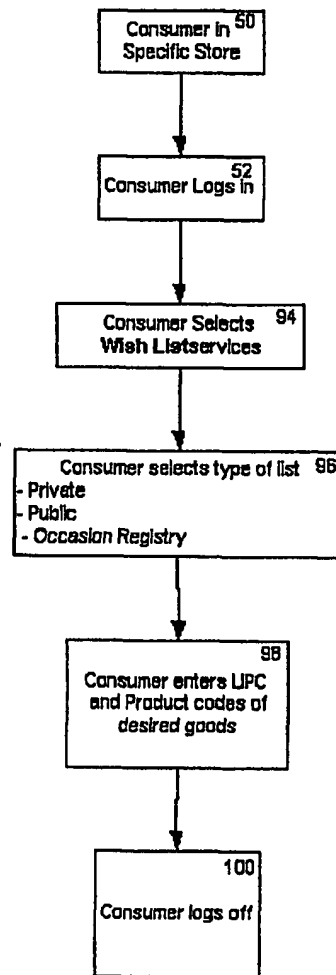
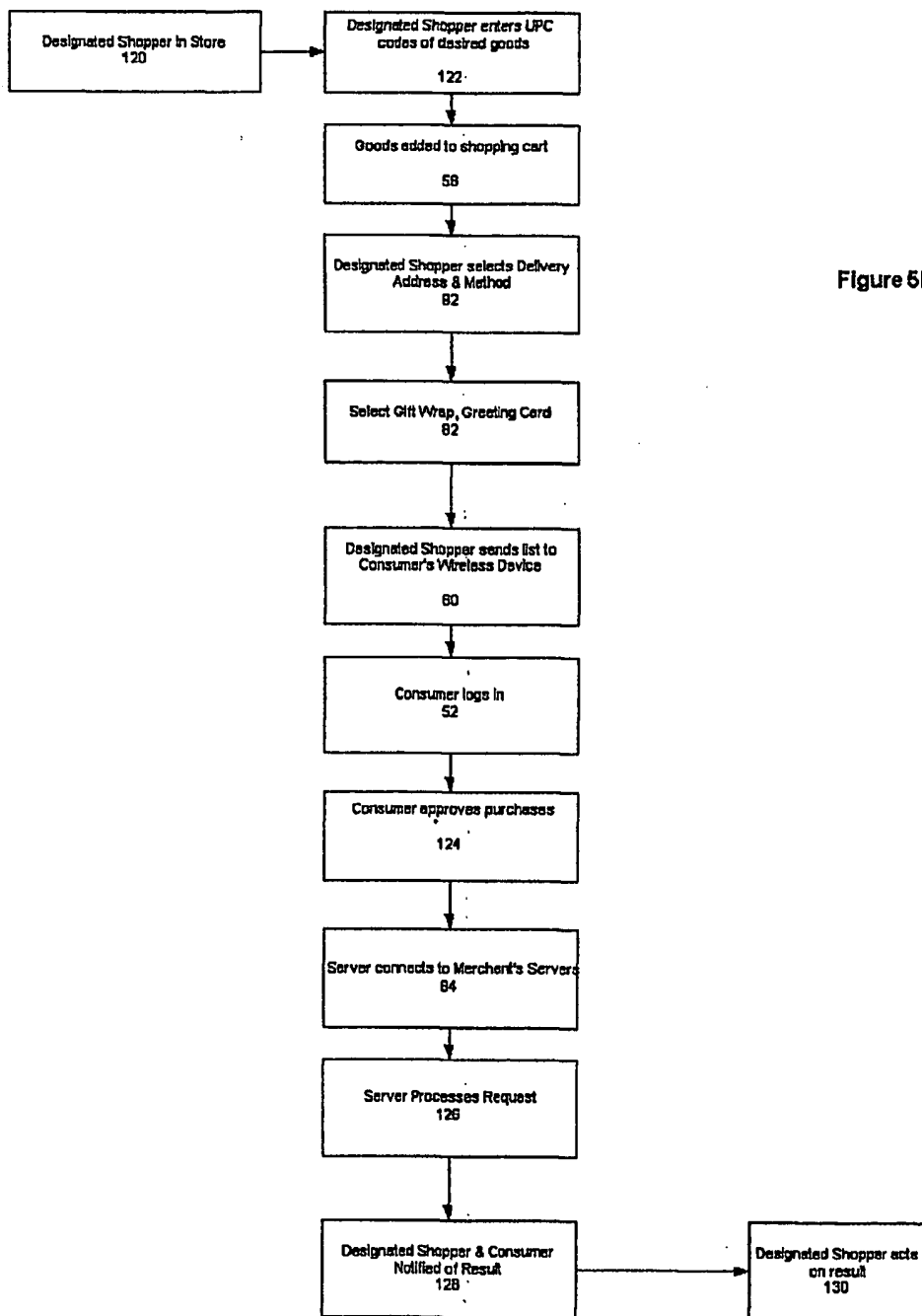


Fig. 5A



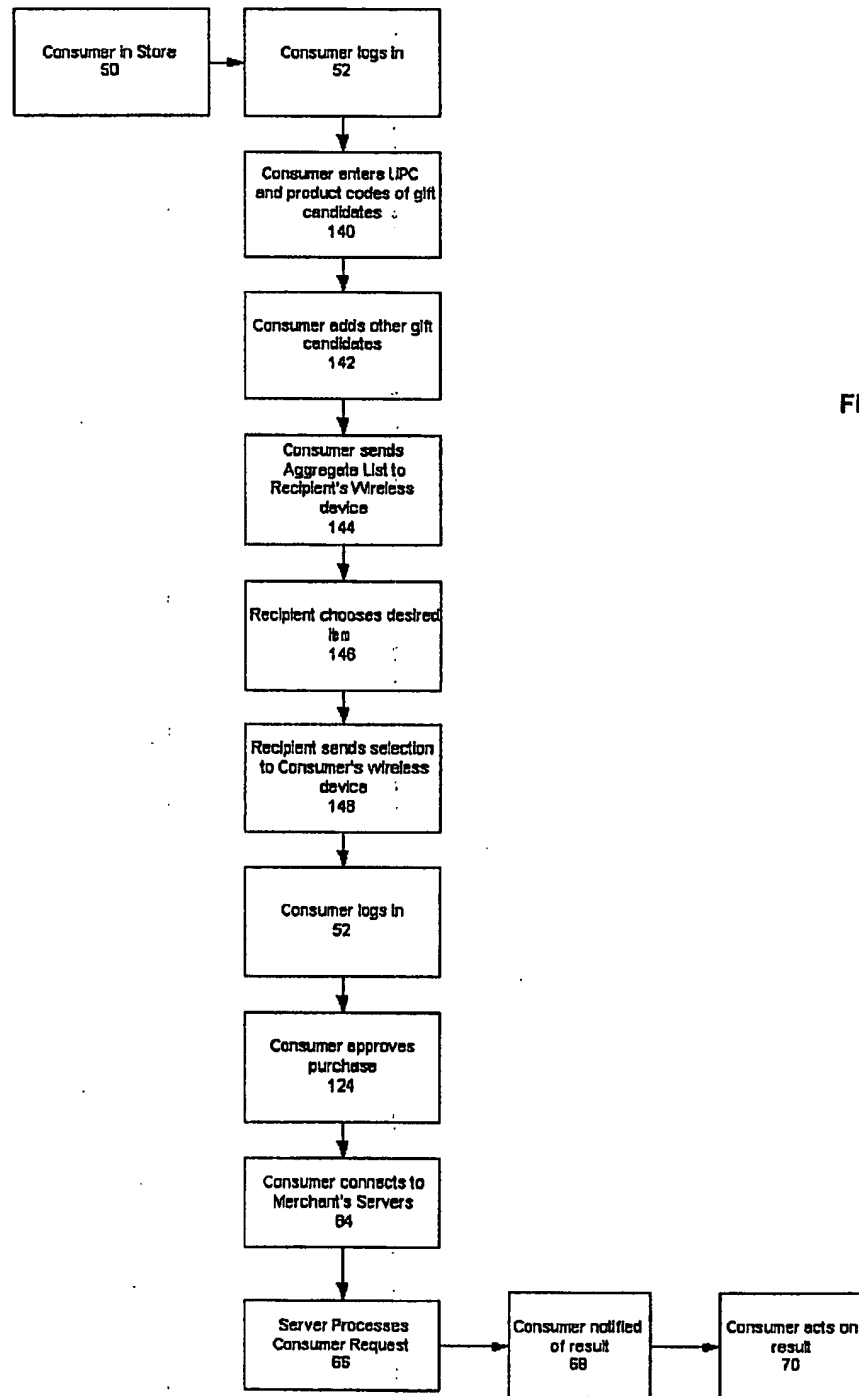


Figure 5c

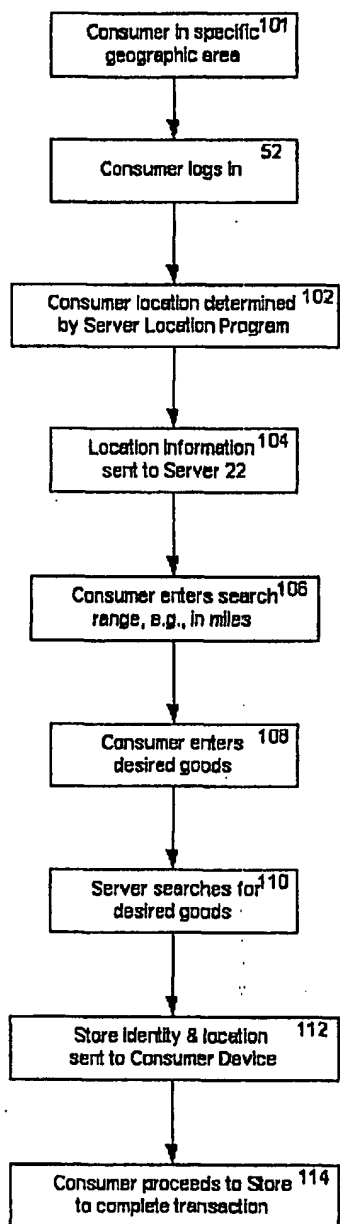


Fig. 6

Gap History

Price: Brands Promotions
All All All

Keywords: None

8067 products in Gap

Men: (4422)

Women: (3645)

Home

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FIGURE 7A

Home Audio...!! History

Price: Brands Promotions
All All All

Keywords: None

25 products in Best Buy Home Audio & Video

Camcorders: (11)

DVD Players: (10)

VCRs: (4)

Home

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FIGURE 8A

Gap History

Price: Brands Promotions
All All All

Keywords: khaki

6244 products in Gap

Men: (3389)

Women: (2935)

Home

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FIGURE 7B

Home Audio...!! History

Price: Brands Promotions
All All All

Keywords: digital

17 products in Best Buy Home Audio & Video

Camcorders: (10)

DVD Players: (7)

Home

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FIGURE 8B

Pants & Sh...!! History

Price: Brands Promotions
38.8 - 39.99 All All

Keywords: khaki

3202 products in Gap Men's Pants & Shorts

Pants: (3198)

Shorts: (12)

Home

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FIGURE 7C

Home Audio...!! History

Price: Brands Promotions
738.8 - 1049.99 All All

Keywords: digital

5 products in Best Buy Home Audio & Video

Camcorders: (7)

DVD Players: (2)

Home

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FIGURE 8C

Pants !! History

Price: Brands Promotions
38.8 - 39.99 All All

Keywords: khaki

1 products in Gap Men's Pants & Shorts

Style: Easy Fit Flat Front Khakis

Color: Khaki

Size: 28W x 38L

Show Listings Clear Home

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FIGURE 7D

Digital !! History

Price: Brands Promotions
738.8 - 1049.99 Sony All

Keywords: digital

5 products in Best Buy Home Audio & Video

Camcorders: Digital

Format: All

Show Listings Clear Home

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FIGURE 8D

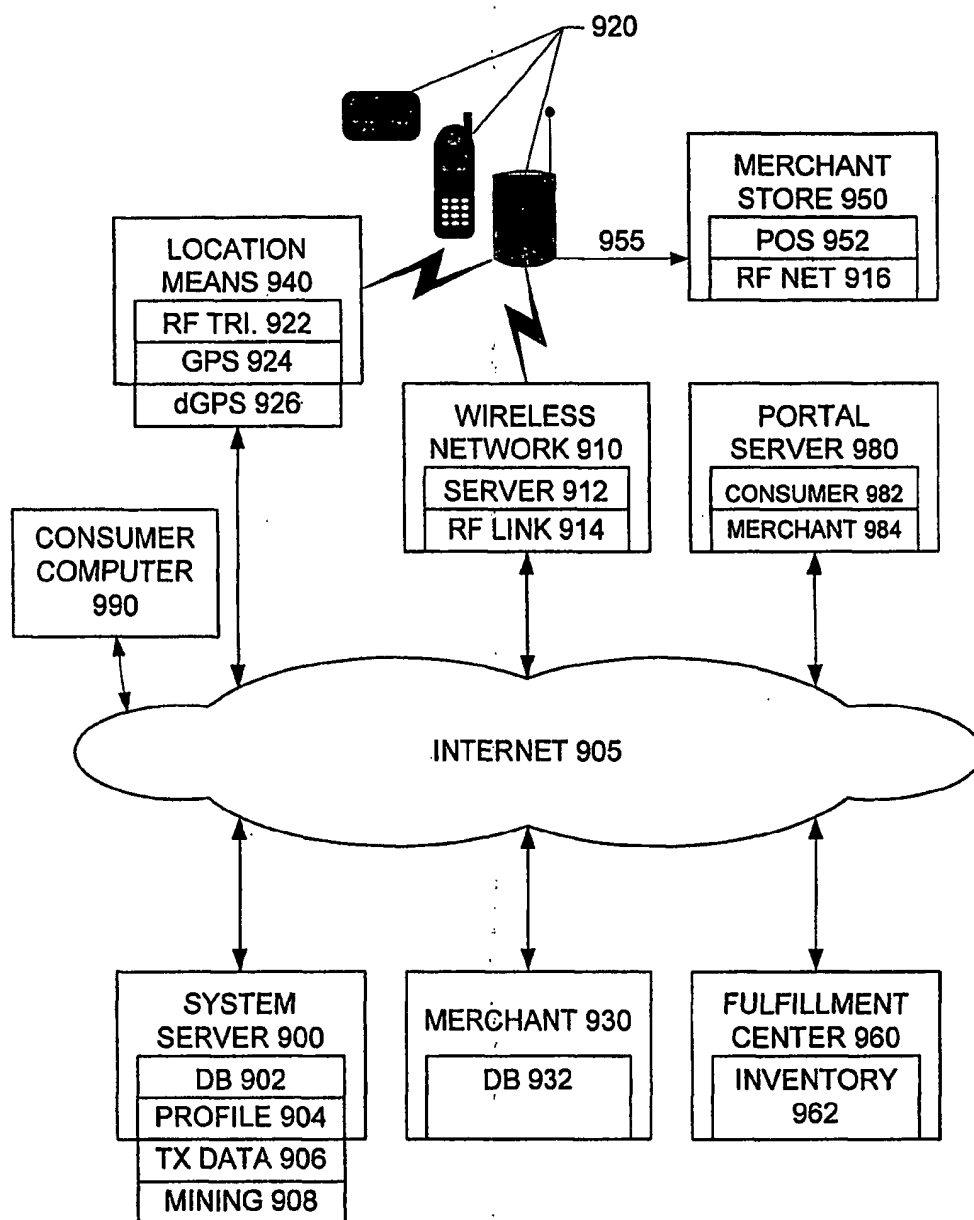


FIGURE 9